

REMARKS/ARGUMENTS

Office Action Summary

Claims 1 through 12 are pending in the application. The Examiner noted that the Webb & Hanzo reference cited at page 13, lines 23-24 was not cited on a Form PTO-892 and therefore has not been considered as prior art. The Examiner noted that the co-pending applications listed on page 13, lines 3-5, and page 19, lines 9-11 could be listed as RELATED APPLICATIONS and suitably inserted into the heading structure of the application. The disclosure stands objected to due to a typographical error on page 18 at line 11. Claims 2-3 and 8-10 stand objected to due to certain informalities. Claims 5-6 stand rejected in 35 U.S.C. § 112 1st paragraph as failing to comply with the enablement requirement. Claims 11-12 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-2, 4, 7-8, and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by US patent 5,282,226 (Critchlow). Claims 3 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Critchlow in view of US patent 5,621,763 (Walczak et al. "Walczak"). Applicant is unaware of any other rejections or objections pending in the application.

The Webb and Hanzo Technical Reference

The reference Modern Quadrature Amplitude Modulation, IEEE Press, 1994, chapter 3, pp. 80-93, by W.T. Webb and L. Hanzo was offered as a general background reference to those skilled in the art. In fact, those skilled in the art should already be familiar with the concepts of QAM modems discussed in that work. Applicant does not believe that the content of the cited portion is material to the patentability of any of the claims of the present application. The Webb and Hanzo reference was therefore not disclosed in a form PTO-892 for consideration by the Examiner.

Incorporation by Reference of Co-Pending Patent Applications

Applicant notes the Examiner's suggestion to modify the arrangement of the Specification so as to list the two cited patent applications in a "CROSS REFERENCE TO RELATED APPLICATIONS" section of the application. However, the two cited applications, which are serial number 09/295,660 (now US patent 6,252,910) to West for BANDWIDTH EFFICIENT QAM ON A TDM-FDM SYSTEM FOR WIRELESS COMMUNICATIONS (page 13, lines 4-5), and serial number 09/307,078 (now US patent 6,628,728) for IMPROVED NYQUIST FILTER AND METHOD (page 19, lines 9-10), are not "related" applications as contemplated under 37 C.F.R. § 1.78 and M.P.E.P. § 201.11. The present application is not a continuation or continuation-in-part of either of these applications, and does not claim the benefit of priority therefrom under 35 U.S.C. §§ 119 and 120. Rather, the Applicant has incorporated by reference the disclosure of the two cited applications under M.P.E.P. § 608.01(p)(I). Applicant thereby relies upon the disclosure of the two cited references for descriptive disclosure support only, and not for filing date priority. Therefore, it is the Applicant's position that a "CROSS REFERENCE" citation in the patent would be improper. If the Examiner disagrees, Applicant is happy to address any concerns raised.

Objections to the Disclosure

The rejection noted that the term "at" should be replaced with the term "art" on page 18, line 11. The Applicant has made such an amendment to the Specification.

Claims Objections

The Examiner required that the expression “said ramp data field” in Claims 2-3 and 8-9 be changed to “said first ramp data field”. The Applicant has made the required amendments.

The Examiner required that the expression “said coefficients” in Claim 10 be changed to “said coefficient selected to minimize energy”. The Applicant has made the required amendment.

Rejections under § 112 - Lack of Enablement

The rejection asserts that Claims 5-6 fail to comply with the enablement requirement under § 112 because Claim 5 is a single means claim, and as such is subject to an “undue breadth” rejection. Claim 6 depends from Claim 5. Applicant has amended Claim 5 to recite a second element, a digital filter, which Applicant believes obviates the rejection under § 112, 1st paragraph. Thus, Claim 5 is in condition for allowance, and Claim 6 depends therefrom.

Rejections Under § 101 - Non-Statutory Subject Matter

The rejection asserts that Claim 11 is non-statutory subject matter in that it only claims an algorithm. Claim 12 depends from Claim 11. Applicant has amended Claim 11 such that the calculated first coefficient is coupled to the digital filter for processing of the intermittent signal. Thus, the calculated result is applied to a statutory process and the rejection is obviated. The rejection as applied to Claim 12 is also thereby obviated.

Rejections Under § 102(e) - Anticipated by Critchlow

Applicant respectfully traverses the rejection of independent Claim 1 and Claim 5 as anticipated by Critchlow. Both of these claims require calculation of at least a first ramp data field, *inter alia*, as a function of at least a first data field. The clear meaning of this language is that the content of the ramp data field be calculated as a function of a first

data field. Critchlow never teaches, contemplates or suggests that the content of the ramp data fields be altered in any way. Rather, Critchlow teaches the use of a zero forcing circuit (item 36 in Figure 3) that prevents any data from being coupled to the modulator (item 46) during the first FIR filter symbol period. Whatever data is coupled from the data source (item 16) is operated on, and the content of such data is never altered in any way.

More particularly, Critchlow uses the start/end detector (item 30) to compare the 'I' and 'Q' outputs of the FIR filter 24 with zero. When a first non-zero value is detected, the zero forcing circuit holds (item 36) holds the output of the FIR filter to zero for one symbol period, but the data fed to the waveform map (item 18) is not altered in any way. This is most succinctly stated at Col. 6, lines 45-62 with respect to Figure 7, which is reproduced for convenience below:

Between each burst, the filter taps X_0 through X_7 are all set to zero as shown at tap line 108 of FIG. 9, thus, providing a zero amplitude RF power output. Upon entry of the first non-zero value to tap X_0 , the zero values in the filter all shift to the left as viewed by taps 110 of which now provides a signal having a value of the product of $C_0 \cdot a$, at the output of the filter. However, since the start/end detection module recognizes this non-zero value as the beginning of a burst, input 44 goes low, which in turn causes multiplexer switches 103 and 105 to output a zero value to modulator 28, thus, providing no RF input to upconverter 54 and power amplifier 58. Upon entry of a second non-zero output a_2 , value a , shifts to the left as shown at 66 which provides a filter output value of $a \cdot C \& a_2 \cdot C_0$, the signal on line 44 goes high which permits multiplexer switches 103 and 105 to output the filter values to the upconverter 54 and power amplifier 58.

Emphasis added. Thus, Critchlow teaches that the first symbol period of the first ramp data field be forced to zero, and then allows the sum of the filter product taps (see Figure 5, generally) to ramp the power level up to its peak value. In contrast, the present invention claims that the content of the ramp data field be calculated as a function of the intermittent data stream, as a means for ramping power up and down. Applicant submits that this approach is unique, novel, and readily distinguishes the teachings of Critchlow. The rejection should be withdrawn.

Regarding the other two independent claims, Claim 7 and Claim 11, both of these claims also require the calculation of a ramp data field content as a function of at least a first data field in an intermittent data signal. As such, both of these claims also clearly distinguish the Critchlow reference.

Rejections Under § 103(a) Obvious Under Critchlow in View of Walczak

Since Claim 3 depends from Claim 1 and Claim 9 depends from Claim 7, and since both Claim 1 and Claim 7 have been shown to be in condition for allowance, applicant submits that Claim 3 and Claim 9 are also in condition for allowance as depending from an allowable independent claims. Such action is courteously solicited.

Other Rejected Dependent Claims

It is well settled law that since dependent Claims 2, 4, 8, 10, and 12 depend from allowable independent claims, then the dependent claims are also in condition for allowance.

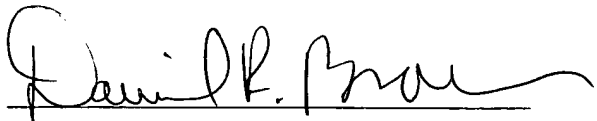
Conclusion

The foregoing is submitted as a full and complete response to the Office Action mailed October 14, 2004. The Applicant believes that the same places the present application in condition for allowance. Reconsideration by the Examiner and allowance of the claimed invention is hereby courteously solicited.

Since the total number of claims in the Application remains unchanged, it is Applicant's belief that all fees in the case have been previously paid, except for the Extension of Time fee, which is enclosed herewith. In the event that the Examiner determines otherwise, the that Commissioner is hereby authorized to charge such additional fees, excluding the Issue Fee, or credit any overpayment to Daniel R. Brown Deposit Account No. 501507.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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